

AMENDMENTS TO THE CLAIMS

Claims 1-13 (Canceled)

Claim 14 (New) A method for cell culture which continuously controls dynamic conditions by application of hydrostatic pressure on a culture liquid in an atmospheric air condition or a gaseous atmosphere condition for culturing cells by centrifugal force, thereby giving stimulation to the cells.

Claim 15 (New) A method for cell culture according to claim 14, wherein for the controlling of dynamic culture conditions by application of hydrostatic pressure, application of the hydrostatic pressure to the cells is periodically changed or maintained for a certain period of time by application of centrifugal force.

Claim 16 (New) A method for cell culture according to claim 14, wherein the hydrostatic pressure is applied in a range of 60MPa or less.

Claim 17 (New) A method for cell culture according to claim 14, wherein the hydrostatic pressure is applied within a range from 0.5 sec to 6 weeks.

Claim 18 (New) A method for cell culture according to claim 14, wherein the application of the hydrostatic pressure is conducted by controlling the number of rotations of a centrifugator.

Claim 19 (New) A method for cell culture according to claim 14, wherein the temperature and the atmosphere are controlled.

Claim 20 (New) A method for cell culture according to claim 14, wherein cells are cultured together with various kinds of biomaterials.

Claim 21 (New) An apparatus for cell culture having a cell-culturing device supported by a rotational shaft in a sealed container for providing cells with hydrostatic pressure by centrifugal rotation.

Claim 22 (New) An apparatus for cell culture according to claim 21, wherein comprising a control mechanism for controlling the rotation time and the rotation speed of the cell-culturing device.

Claim 23 (New) An apparatus for cell culture according to claim 21, wherein the number of rotations is controllable within a range from 10 to 25,000 rpm for providing the hydrostatic pressure of 60 MPa or less.

Claim 24 (New) An apparatus for cell culture according to claim 21, wherein the inside of the cell culturing device is divided so that a plurality of types of cells can be cultured simultaneously.

Claim 25 (New) An apparatus for cell culture according to claim 21, wherein an injection port and an exhaust port for the gaseous atmosphere into and out of the sealed container, and a control mechanism for injecting and exhausting the atmospheric gas are provided.

Claim 26 (New) An apparatus for cell culture according to claim 21, wherein a control mechanism for the temperature in the sealed container is provided.

Claim 27 (New) A method for cell culture according to claim 15, wherein the hydrostatic pressure is applied in a range of 60MPa or less.

Claim 28 (New) A method for cell culture according to claim 15, wherein the hydrostatic pressure is applied within a range from 0.5 sec to 6 weeks.

Claim 29 (New) A method for cell culture according to claim 16, wherein the hydrostatic pressure is applied within a range from 0.5 sec to 6 weeks.

Claim 30 (New) A method for cell culture according to claim 27, wherein the hydrostatic pressure is applied within a range from 0.5 sec to 6 weeks.

Claim 31 (New) A method for cell culture according to claim 15, wherein the application of the hydrostatic pressure is conducted by controlling the number of rotations of a centrifugator.

Claim 32 (New) A method for cell culture according to claim 16, wherein the application of the hydrostatic pressure is conducted by controlling the number of rotations of a centrifugator.

Claim 33 (New) A method for cell culture according to claim 27, wherein the application of the hydrostatic pressure is conducted by controlling the number of rotations of a centrifugator.